ABSTRACT

A printer with a multi-segment printhead has multiple engine/controllers (10) configured to be coupled with other engine/controllers to drive the printhead (33). The controllers each have an interface (27) at which to receive compressed page data. Image decoders (28, 88) decode compressed image planes image decoders to perform an expansion, in pipeline fashion, for the received compressed page data. A half-toner/compositer (29) composites respective strips of the decoded image planes and sends output to a printhead interface (32). A printhead interface (32) interfaces with the printhead. A synchronization signal generator (89,90) may output a synchronization signal that is used to synchronize print engine/controllers. One printhead interface (32) preferably acts as master generating the synchronization signal to synchronize all the print engine/controllers to drive the printhead at any one or more of higher speed, higher input resolution, higher outlet resolution or wider format. The half-toner/compositor (29) scales input image planes under control of a margin unit (57) set the print engine/controller to establish print data for a strip only of the image, the image being built from the respective strips from the multiple print engine/controllers.